April 29, 1969 E. W. FROST 3,441,239

SURVEY ROD HOLDER

Filed March 29, 1967

Fig. 1

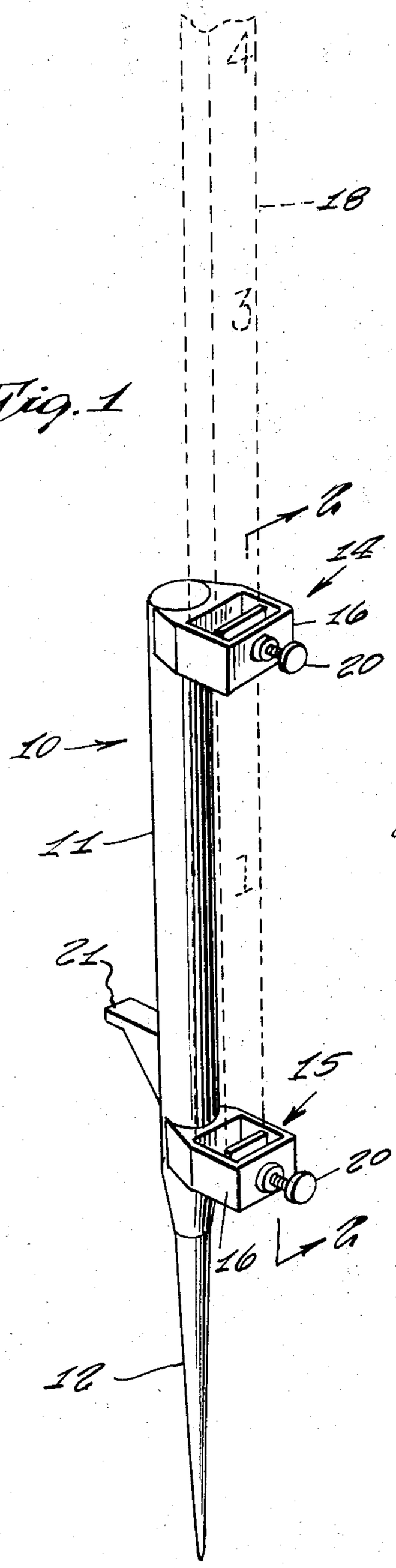


Fig. 2

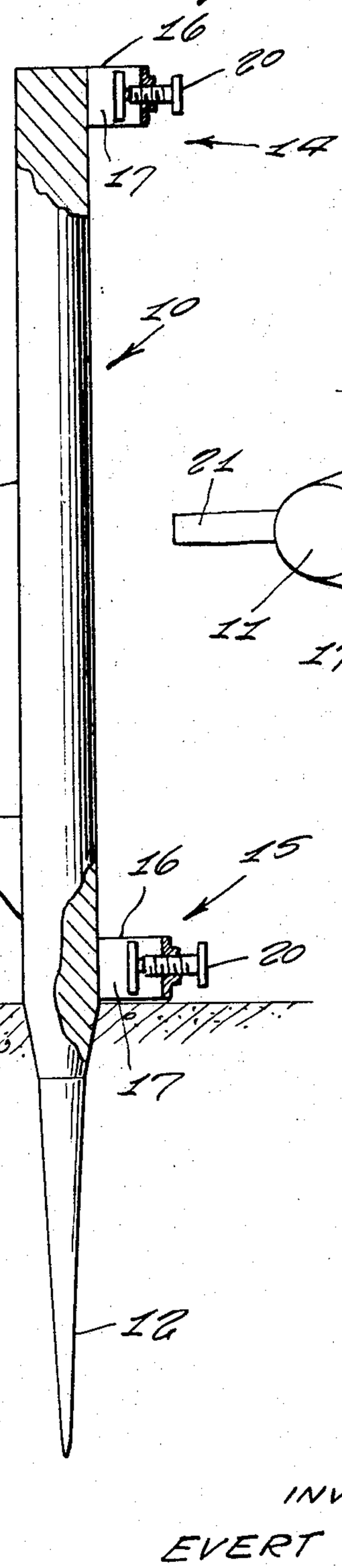
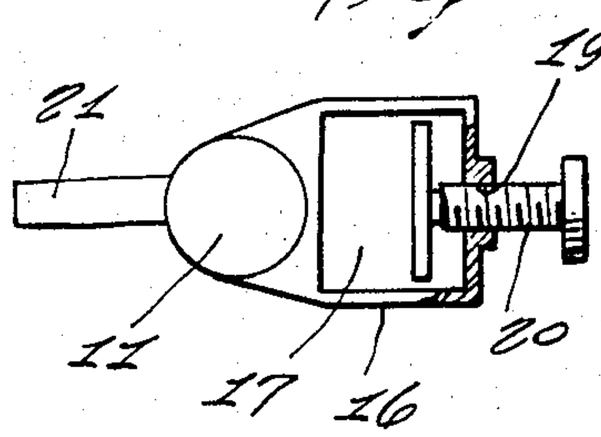


Fig. 3



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SURVEY ROD HOLDER

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U.S. Cl. 248—44 1 Claim

ABSTRACT OF THE DISCLOSURE

A device for holding a survey rod in an upstanding position, the device including a vertical rod having a lower end pointed so as to be readily received into the ground, the rod having an upper and lower clamp for securing a survey rod thereto and additionally having a foot rest along one side for purpose of allowing an operator to push the device with his foot into the ground wherever the ground is too hard for pushing the device by the hands alone.

This invention relates generally to surveying equipment. More specifically it relates to survey rods and supporting devices for survey rods.

It is generally well known to those skilled in the art when a survey is made across a terrain that it usually requires two men, one of which operates a transit and the other is used to hold upright a survey rod which is graduated along its length. In many instances, the surveyor is forced to accomplish the work alone without the aid of a second man for holding the survey rod. In such cases, the surveyor will attempt to support the survey rod in an upright manner upon the ground by employing stones or any other material to keep the survey rod upright, or he may lean it against a tree or even an automobile. This situation however is of course objectionable and accordingly in need of improvement.

Accordingly there is a principal object of the present invention to provide a holder for a survey rod which will support a survey rod in upright position without the necessity of employing a second man.

Another object of the present invention is to provide a survey rod holder having means for being supported within the ground.

Yet another object of the present invention is to provide a survey rod holder having a foot rest so as to allow an operator to force the device with his foot into the ground so as to provide stability to the device for supporting a survey rod.

Yet another object of the present invention is to provide a survey rod holder having a pair of spaced apart clamps so as to secure a survey rod thereto at a selected elevation respective thereto.

Other objects of the present invention are to provide a survey rod holder which is simple in design, and inexpensive to manufacture, rugged in construction, easy to use and efficient in operation.

These and other objects will be readily evident upon a study of the following specifications and the accompanying drawing wherein:

FIGURE 1 is a prespective view of the present invention shown in operative use,

FIGURE 2 is a side elevation view and shown partly in cross-section as viewed along line **2—2** of FIGURE 1,

FIGURE 3 is a top plan view thereof.

Referring now to the drawing in detail, the reference numeral **10** represents a survey rod holder of the present invention wherein there is an elongated post **11** of circular cross-sectional configuration and which has a lower end **12** that is tapered to a point so that the same may be easily introduced into a ground **13.**

A clamp **14** is secured at the upper end of the post **11** and a lower clamp **15** is secured at an intermediate point between the opposite ends of the post, the lower clamp being located adjacent the base of the tapered end **12.**

Each of the clamps **14** and **15** comprise a generally U-shaped frame rigidly affixed to the post **11,** each frame **16** enclosing a central opening **17** into which a survey rod **18** may be inserted. A threaded opening **19** in the frame **16** receives a tightening screw **20** which is adopted to bear pressure against the side of the survey rod and thus hold the same securely to the holder.

It is to be noted that the clamps **14** and **15** are in vertical alignment therebetween so that the survey rod may be introduced into both of the clamps.

A foot rest **21** is secured to one side of the post **11** and provides a means for an operator to place his foot thereupon to assist him for inserting the device into the ground **13.**

In operative use, the device is made to stand upright by inserting the tapered end **12** into the ground **13,** as shown in FIGURE 2 of the drawing and the tightening or pressure screws **20** being outwardly moved to allow insertion of a survey rod **18** into the openings **17** of each of the clamps **14** and **15,** after which the pressure screws **20** are clamped tightly against the side of the survey rod **18,** thus securing a rod in a stationary vertical position so that the same may be read by an engineer at a transit located some distance away. It is to be noted that if the device may not be inserted its full tapered distance into a ground, that the clamps will permit the survey rod to be accordingly adjusted so that the lower end thereof engages the ground surface and thereby provide a correct reading. It is to be further understood that a measuring breakdown may be painted upon a front side of the clamps so as to provide a reading in the vicinity where the survey rod is covered by the clamp frame.

While various changes may be made in the detailed construction, it is to be understood that such changes will be within the spirit and scope of the present invention.

I claim:

1. In a survey rod holder, the combination of a post of elongated configuration, said post having a lower end that is tapered toward a point to allow easy insertion of said end into a ground, and said post having a pair of spaced apart clamps secured thereto, said clamps being in longitudinal alignment with each other for purpose of securing a survey rod thereto, each of said clamps comprising a generally U-shaped frame rigidly secured to said post, a threaded opening in a side of said frame, a pressure screw threadingly engaged with said threaded opening, and each of said frames encircling a central space into which said survey rod is introduced, a footrest being secured to one side of said post, said footrest providing a means to allow a person to push the lower end of said post into the ground by using his foot, said footrest being positioned at an elevation between said clamps, whereby a lower of said clamps serves as a stop against a ground surface when inserting said post into the ground.

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